

John B. Gallagher and Edward J. Quinn, Trustees for  
CHICAGO NORTH SHORE AND MILWAUKEE RAILROAD COMPANY

A N N U A L R E P O R T

FOR THE YEAR 1944

SUPERINTENDENT, MAINTENANCE OF WAY, STRUCTURES  
& ELECTRIC POWER SERVICE

John B. Gallagher and Edward J. Quinn, Trustees for  
CHICAGO NORTH SHORE and MILWAUKEE RAILROAD COMPANY

MAINTENANCE OF WAY, STRUCTURES and  
ELECTRIC POWER SERVICE DEPARTMENT

ANNUAL REPORT  
FOR THE YEAR 1944

## FOREWORD

On July 1, 1944 the Maintenance of Way Department and the Electrical Department were consolidated. Mr. Frank J. Kramer was appointed Superintendent of Maintenance of Way, Structures and Electric Power Service, Mr. H. G. Mason was appointed Assistant Superintendent of Way and Structures and Mr. E. A. Nevins was appointed Assistant Superintendent of Electric Power Service.

This report is an account of the work accomplished by the consolidated department and includes all A.F.E. and extra ordinary maintenance work performed by contractors and regular company forces as well as information and statistics relating to the regular maintenance work which are of interest at this time and will be of value in the future for record and reference purposes.

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TRACK AND ROADWAY DIVISION

ADDITIONS AND BETTERMENTS

RAIL RENEWAL ON SKOKIE VALLEY LINE - A.F.E. 4365

A total of 15,801 track feet of 80# A.S.C.E. rail was relaid with new 100# R.E. rail on the Skokie Valley Line. 13,442 track feet were installed on the southbound track by the Herlihy Mid-Continent Company between Sunset Ridge Road and a point 2,200 feet north of Woodridge Station. 2,359 track feet were installed by company forces on the northbound track, north of catenary Bridge 74 which is 3,900 feet north of Lake Bluff Station. All special work was renewed and 6 rail anchors per rail installed.

RAIL RENEWAL ON SKOKIE VALLEY LINE - A.F.E. 4470

A total of 15,647 track feet of 80# A.S.C.E. rail was relaid with new 100# R.E. rail on both tracks between Lake Bluff and Pettibone Yard on the Skokie Valley Line. All special work was renewed and 6 rail anchors per rail installed. This work was done by company forces and completes the installation of 100# rail on the Skokie Valley Line from Howard Street to North Chicago Junction.

EXTENSION OF SIDE TRACK - DOWNEYS STATION - A.F.E. 4491

The loading track serving the high platform at Downeys Station, Skokie Valley Line, was extended north 22 feet to permit spotting baggage cars opposite the baggage room door. The track was built with 80# A.S.C.E. relay rail.

INSTALLATION OF BALLAST IN ILLINOIS - A.F.E. 4420

The Herlihy Mid-Continent Company continued work on their contract, started in 1943, for ballasting and other track work from Waukegan to the State Line. In 1944 both tracks from 23rd Street, Zion to the State Line were raised to grade, lined, surfaced and dressed to standard cross section except for the northbound track from 18th Street to Winthrop Harbor which has not yet been dressed. All crossings were skeletonized to bottom of ties and new ties and plank installed. Average lift was 4½ inches. The contractor used the following material:

2,512 - Cross Ties  
46 - Switch Ties  
5,062 - Tie Plates  
178 - Cars Stone  
34 - Cars Cinders

## TRACK AND ROADWAY DIVISION

### ADDITIONS AND BETTERMENTS - CONTINUED

The asphaltic crossings and crosswalks at Wilmette and Central Avenues were renewed with precast concrete slab crossings furnished by the Village of Wilmette. Both crossings were skeletonized to bottom of ties, new 8'-6" ties installed and track raised on new stone ballast. The Village furnished material for inter-track drainage installed at both locations. The northbound track cut for automatic gates at Wilmette Avenue was moved to the north side of the street. In connection with this project, 1,243 track feet of 80# A.S.C.E. rail was relaid with new 100# R.E. rail on both tracks from the north end of Greenleaf Avenue curve to the north side of Central Avenue. All work was done by company forces.

### TRACK RECONSTRUCTION - KENILWORTH - A.F.E. 4485

The track and pavement in the Kenilworth Avenue crossing, Kenilworth, was rebuilt entirely. 992 lineal feet of new 102# rail was installed replacing 95# rail. The old brick pavement, concrete ballast and steel ties were removed and replaced with wood ties, stone ballast and concrete pavement. Standard tie rods were installed and all joints thermit welded. All track work was done by company forces. The High-Early Strength concrete pavement was installed by the Herlihy Mid-Continent Company.

In addition to this work a total of 3,670 track feet of 80# A.S.C.E. rail was renewed with new 100# R.E. rail on both tracks, extending north to connect with the existing 100# rail north of Melrose Avenue and extending south to the end of the reverse curve south of Kenilworth Avenue. The track zone from Kenilworth Avenue crossing to the north line of Melrose Avenue was paved with macadam and all rail joints were thermit welded.

### RAIL RENEWAL ON SIDE TRACKS - ILLINOIS - A.F.E. 4472

65# rail was renewed with 80# A.S.C.E. relayer rail at the following locations:

Great Lakes - East Side Track	-	4,159 S.T. Ft.
Lake Avenue, S.V.L. Yard Tracks	-	1,759 S.T. Ft.
West Park Avenue Tail Track	-	275 S.T. Ft.
Pettibone Yard Tracks	-	233 S.T. Ft.
Rondout - South Interchange Track	-	726 S.T. Ft.

TRACK AND ROADWAY DIVISION

ADDITIONS AND BETTERMENTS - CONTINUED

INSTALLATION OF TIE PLATES IN ILLINOIS - A.F.E. 4473

7,890 - 100# tie plates and 5,274 - 80# x 100# tie plates were installed by company forces on ties renewed in main tracks in Illinois. In addition 3,068 - 100# tie plates and 1,894 second hand 80# x 100# tie plates were installed by the Herlihy Mid-Continent Company in the district between 23rd Street, Zion and the State Line.

<u>Section</u>	<u>100#</u>	<u>Tie Plates</u>
		<u>80# x 100#</u>
1 - Winnetka	1,788	32
3 - Highwood	136	1,108
4 - Lake Forest	-	90
5 - Libertyville	-	3,624
16 - Howard-Dempster	125	-
17 - Glenayre	2,358	-
18 - Briergate	2,308	-
20 - Deerpath	125	-
21 - South Upton	1,050	420
- 23rd St., Zion to State Line	3,068	(1,894 S.H.)
Total	10,958	5,274 New 1,894 S.H.

Note: Second hand tie plates not charged to the A.F.E.

REHABILITATION OF TRACK AND PAVEMENT - WAUKEGAN CITY LINE - A.F.E. 4434

The track zone on North and South Genesee Street from 10th Street to Clayton Street and on Washington Street from Sheridan Road to West Street was surfaced with asphalt. This work was done in conjunction with the City of Waukegan who resurfaced the balance of the street. 669 feet of rail in the Belvidere Street curves was renewed with new 102# rail which was precurved in the shops of the Milwaukee Transport Company.

INSTALLATION OF BALLAST IN WISCONSIN - A.F.E. 4421 and 4502

In addition to the contract let to the Herlihy Mid-Continent Company for ballasting and rail relaying in Kenosha and from Root River to Oak Creek, a new contract was let to the same company covering the section from Root River to Middle Road, Racine. Work has been finished on the section

## TRACK AND ROADWAY DIVISION

### ADDITIONS AND BETTERMENTS - CONTINUED

from Roosevelt Road, Kenosha to a point 500 feet north of Mile Post 54 and from Root River to Oak Creek except for the railroad crossing at Ryan Tower. Track was skeletonized to bottom of ties, raised to grade, lined, surfaced and dressed to standard cross section. Average lift was 6 inches. Crushed gravel ballast was installed on the northbound track from Root River to Oak Creek and on the southbound track from Oak Creek to 1,300 feet north of 7-Mile Road. The remainder of this track was raised on stone ballast. Treated gum crossings were installed at 63rd Street, 60th Street and 52nd Street, Kenosha. All other crossings were renewed with plank except Ryan Road which was not disturbed. On these sections the contractor installed the following material:

<u>Item</u>	<u>Kenosha</u>	<u>Root River - No.</u>	<u>Total</u>
Cross Ties	1,858	7,385	9,243
Switch Ties	102	53	155
Tie Plates	3,996	14,982	18,978
Stone Ballast - Cars	104	195	299
Gravel Ballast - Cars	-	576	576
Cinders - Cars	-	10	10

In addition the contractor renewed 605 lineal feet of 80# A.S.C.E. Rail with new 100# R.E. rail in the northbound track between the C. & N.W. Ry. crossing the north side of 60th Street crossing in Kenosha, installed an intertrack drainage system between 63rd and 64th Streets, Kenosha and renewed 364 pairs of 100# angle bars on the south bound track through Kenosha.

On the section south of Root River, work was confined to the south bound track. Very little skeletonizing was done except in crossings. The track was raised on the old ballast and dressed with new stone. Shoulders were built up with bank run gravel. At the south end of the Root River Bridge, 600 feet of track was lowered a maximum of 6 inches in order to make the proper vertical curve. Plank crossings at 3-Mile Road, Davidson Road and Camper's Road were renewed. Average raise was 4 inches. At the end of the year the ties had been renewed and track raised to Rapids Road and gravel shoulder built to the Quarry crossover. The contractor installed the following material.

879 Cross Ties  
59 Cars Stone Ballast  
37 Cars Bank Run Gravel  
1,758 Tie Plates (S.H.)

# TRACK AND ROADWAY DIVISION

## ADDITIONS AND BETTERMENTS - CONTINUED

### RAIL RENEWAL - WISCONSIN - A.F.E. 4471

A total of 29,814 track feet of 80# A.S.C.E. rail was relaid with new 100# R.E. rail on both tracks north from Root River. 12,763 track feet was installed on the southbound track, reaching to a point 1,200 feet south of 6-Mile Road and 17,051 track feet was installed on the northbound track, extending to a point just south of Nechuta Road. This work was done by the Herlihy Mid-Continent Company. The same company also relaid 330 lineal feet of 65# rail with 80# A.S.C.E. re-layer rail in the 4-Mile Road Siding. Included in this rail renewal work was the installation of 16,904 - 100# tie plates to replace 80# x 100# plates.

### INSTALLATION OF TIE PLATES IN WISCONSIN - A.F.E. 4474

3,201 - 100# tie plates and 80 - 80# x 100# tie plates were installed by company forces on ties renewed in main tracks in Wisconsin. In addition, 4,833 - 100# plates and 15,087 second hand 80# x 100# plates were installed by the Herlihy Mid-Continent Company on ties renewed in Kenosha and from Rapids Road to Oak Creek.

<u>Section</u>	<u>Tie Plates</u>	
	<u>100#</u>	<u>80# x 100#</u>
9 - South Kenosha	918	-
10 - Kenosha	20	-
10 - Kenosha - By Herlihy	2,748	1,248 (S.H.)
11 - Racine	960	62
12 - 4-Mile Road - By Herlihy	2,085	7,589 (S.H.)
13 - Carrollville - By Herlihy	-	6,250 (S.H.)
14 - Grange Avenue	1,271	-
15 - Milwaukee	32	18
	8,034	80 New 15,087 S.H.

Note: Second hand tie plates not charged to the A.F.E.

TRACK AND ROADWAY DIVISION

ADDITIONS AND BETTERMENTS - CONTINUED

Track Raise at Rondout - Job Order 438

In order to provide more clearance over their tracks, the Milwaukee Railroad entered into a contract with the North Shore Line for raising the Rondout Bridge 2 feet. This work was done by the Herlihy Mid-Continent Company and involved raising the track from the E.J. & E. Ry. Bridge to the west side of Bradley Road. The embankment was widened with dirt trucked from property bought by the contractor on St. Marys Road. Preliminary raise was made on bank-run gravel and final raise on prepared gravel ballast. Ties were renewed where necessary.

In connection with this work the wing walls of the Milwaukee Road Bridge were extended and raised. The parapets on the highway arch were raised and the wing walls extended and raised. New wing walls were built on both ends of the culvert west of the Milwaukee Road and a new portal wall built on the north end.

The contractor used the following material:

183 Cars Bank-run Gravel  
47 Cars Gravel Ballast  
870 Ties  
1740 Second Hand Tie Plates

TRACK AND ROADWAY DIVISION

MAINTENANCE WORK

In addition to the routine work of maintaining the track and right-of-way, the following work was done and charged to Maintenance Accounts:-

Surfaced new 100# rail on South Bound track from Sunset Ridge Road to one-half mile north of Woodridge.

Surfaced both tracks from the north end of Lake Bluff Curve to Pettibone Yard.

Renewed the high rail on both tracks in the curve at Valley Junction with 80# relayer rail.

Renewed approximately 2000 pairs of 100# angle bars with new bars on both tracks from 14th Street, North Chicago, to Glen Flora Crossover. The old angle bars were reformed by the Carter Blatchford Company of Aurora, Illinois.

Renewed 1337 pairs of 100# angle bars with reformed bars on both tracks from the south end of Klinkerts Curve to Racine Tower.

Cleaned and repaired tile sub-drains in both ditches between 4-Mile Road and 5-Mile Road.

String-lined and surfaced both tracks in College Avenue Curve.

Surfaced North Bound track from Oklahoma to Harrison Street.

Repaired crossings with T.M.E.R. & T. Company at Mitchell, Greenfield, National, Wisconsin and 3rd Streets.

Renewed 18 expansion rails on 6th Street Viaduct.

Renewed double track curve at 6th and Glyborn Streets, Milwaukee, with 140# rail. The flangeway of this rail was planed out to accommodate M.C.B. Flanges.

Renewed south half of special work at Milwaukee Terminal.

Renewed the high rail on both tracks in the curve south of Linden Avenue, using 80# relayer rail.

The crossing at Linden Avenue was completely rebuilt. New ties and stone ballast were installed and a plank and asphalt crossing built. Intertrack drainage was installed through the crossing.

TRACK AND ROADWAY DIVISION  
MAINTENANCE WORK - CONTINUED

Rebuilt the crossings at Forest and Elmwood Avenues, Wilmette, installing new ties, plank and asphalt. Renewed the high rail on both tracks in the Reverse Curve with 80# relayer rail.

Lined and surfaced both tracks from Elm Place to Vine Avenue, Highland Park. Renewed high rail on both tracks in the Reverse Curve with 80# relayer rail. The Elm Place Crossing was rebuilt completely with new ties, stone ballast, plank, and asphalt. An inter-track drainage system was installed extending from the South Side of Elm Place to the M.D. Station.

Surfaced both tracks from Stewart Avenue to Mundelein. Renewed ties and plank in Crossings at Garfield Avenue, Dymond Road and Wheeler Road.

Installed Mechanical Switchmen replacing spring connecting rods at the following locations:- Both switches of Northbrook Crossover, S.B. Switch Downeys Crossover on the Shore Line, S.B. Switch at Oklahoma Crossover, North End of N.B. Gauntlet Track at Main Street and Rondout Interchange Track Switch.

TRACK AND ROADWAY DIVISION  
MAINTENANCE WORK - CONTINUED

TIES RENEWED

Ties were renewed by Company Forces as follows:-

<u>SECTION</u>	<u>MAIN LINE</u>	<u>SIDE TRACK</u>	<u>SWITCH</u>
1 - Winnetka	845	-	-
3 - Highwood	421	58	64
4 - Lake Forest	401	-	2
5 - Libertyville	2166	325	11
6 - Waukegan - East	-	11	31
7 - Waukegan - West	130	219	1
8 - Zion	-	-	-
9 - McKeon Road	869	-	-
10 - Kenosha	485	-	-
11 - Racine	444	33	-
12 - 4-Mile Road	55	-	-
13 - Carrollville	51	-	34
14 - Grange Avenue	810	-	26
15 - Milwaukee	77	277	23
16 - Howard - Dempster	410	-	259
17 - Glenayre	1520	-	31
18 - Briergate	1526	-	51
20 - Deerpath	95	-	37
21 - South Upton	1044	-	4
Total By Company Forces	11,349	923	574

By Herlihy Mid-Continent Company:-

5 - Libertyville	870	-	-
8 & 9 - Zion to State Line	2512	-	46
10 - Kenosha	1858	-	102
12 - 4-Mile Road	3265	-	1
13 - Carrollville	4999	-	52
Total By Contractor	13,504	-	201
GRAND TOTAL - TIES RENEWED	24,853	923	775

## BRIDGE AND BUILDING DIVISION

### ADDITIONS AND BETTERMENTS

#### NEW STATION AT GLENCOE - A.F.E. 4453

The temporary station at Park Avenue, Glencoe, built in 1943, was put in service on February 22, 1944, following the installation of an oil-burning space heater. The old station was removed.

#### CONSTRUCTION OF INSPECTION SHOP AT HIGHWOOD - A.F.E. 4422

Work was completed during the year on the remodeling of the west half of the old power house to make an inspection shop for the Mechanical Department. The interior of the building and all exterior trim was painted by the W. J. Scown Company. Company forces built a sand storage bin at the south end of the sand drier building. This bin, with a capacity of 110 cubic feet, is made of precast concrete slabs supported by steel rail posts set in concrete and has a concrete floor. A Link-Belt stoker of 1250# per hour capacity was installed in a pit at the boiler room. The boiler was completely re-tubed by the Waukegan Steam Boiler Works.

#### ADDITION TO TRANSPORTATION OFFICE - HIGHWOOD - A.F.E. 4423

The W. J. Scown Company completed the construction of a one-story fire-proof addition, 16' x 50', on the west end of the Annex Building. Most of this work was done in 1943.

#### TRAINMEN'S ROOM - HIGHWOOD - A.F.E. 4483

A one-story fire-proof brick building 52' x 12' was built just north of the Lamp House at Highwood Yard. This building is constructed with face brick walls on concrete footings with a concrete floor and precast concrete slab roof deck coated with a 3-ply asphalt roof. Electric lights and an Arcola Hot Water Heating Plant were installed. The building is divided into two parts - one for trainmen and switchmen and the other for a lamp-room and storage space for coal for the cars. A concrete ash bin 8' x 7' was built north of this building. All construction work was done by the W. J. Scown Company. The old frame Lamp House and Pit Shanty was removed by Company forces.

#### ADDITIONAL FACILITIES - HIGHWOOD TRAINMEN'S ROOM - A.F.E. 4487

A one-story frame addition, 14'-6" x 8' in size, was built on the north side of the Trainmen's Room at Highwood. The interior is finished with 3/16" transite and has a colored cement floor. A new shower stall, an automatic water heater, two toilet stalls and two lavatories were installed replacing old facilities. This work was done by the W. J. Scown Company.

## BRIDGE AND BUILDING DIVISION

### ADDITIONS AND BETTERMENTS - CONTINUED

#### BAGGAGE ROOM AND CROSS WALK - FORT SHERIDAN - A.F.E. 4463

Company forces built a 10' x 20' frame baggage room on the north end of the Fort Sheridan Station. A 5-foot sliding door is provided in the east wall and a standard door opens into the Station. A new 8-foot crosswalk was built at the north end of the South Bound platform and both platforms ramped down to meet it.

#### RETAINING WALL AND STAIRWAY - GREAT LAKES - A.F.E. 4455

The Herlihy Mid-Continent Company completed construction of a reinforced concrete retaining wall and stairway at Great Lakes Main Gate Station. This work was started in 1943. The stairway, 16 feet long, by 6 feet wide, is located on the east platform, south of the mouth of the pedestrian underpass, and leads up to a concrete landing, 10' x 6', at the level of Sheridan Road. The retaining wall extends south from the stairway 125 feet along the east bank and gives a platform width of 16 feet.

#### EXTEND PLATFORMS - NORTH CHICAGO JUNCTION - A.F.E. 4468

The South Bound Main Line platform was extended north 160 feet with a cinder fill supported by a timber crib made of old ties. The platform is level with the base of rail. A standard 2 x 4 railing was installed on this extension. On the North Bound Main Line platform a new stairway was built leading to the parking space and bays were built for the storage of baggage trucks and sand boxes.

#### IMPROVEMENT OF DRIVEWAY AND PARKING SPACE - NORTH CHICAGO JUNCTION - A.F.E. 4475

The grade at the south end of the road from 22nd. Street to the North Chicago Junction Station was cut down a maximum of 3 feet and the material excavated used to raise the level of the parking space. A six inch macadam pavement was installed on the road and parking space. All work was done by the Herlihy Mid-Continent Company.

#### INSTALLATION OF FOLDING GATE - NORTH CHICAGO JUNCTION - A.F.E. 4482

The metal folding gates at North Chicago Junction Station which originally extended across the room at right angles to the west wall were relocated to run parallel with the lunch counter. One new folding gate was installed to complete the enclosure along the counter and a wire partition with a door in it erected at the north end of the concession space. This installation provides additional waiting space for patrons after the concession is closed.

BRIDGE AND BUILDING DIVISION  
ADDITIONS AND BETTERMENTS - CONTINUED

RETIREMENT OF TREESTLE - EDISON COURT - A.F.E. 4110-C

Work of retiring the Rynksel Coal Trestle, started in 1943, was completed during the year.

RETIREMENT OF STATION FACILITIES IN ILLINOIS - A.F.E. 4408-C

Station facilities were retired at 21st. Street and 27th Street, Zion, completing a Retirement Program started in 1943.

STATION FACILITIES AT RONDOUT - A.F.E. 4412

The station stop at Rondout was moved to a new location east of the Milwaukee Railroad Bridge. Two new 8' x 48' low fill platforms were constructed and two standard 12 foot shelters erected. One shelter is of new material and the other was removed from Washington Avenue, Highwood, in 1943. A four foot wooden stairway was built from the South Bound platform to the ground. All construction work was done by Company forces. The Herlihy Mid-Continent Company removed the old station and platforms.

INSTALLATION OF STOKERS - A.F.E. 4429

A 200# per hour Link-Belt Stoker was installed in the Greenleaf Avenue Store Building in Wilmette.

STATION IMPROVEMENTS - NORTH CHICAGO - EAST LINE - A.F.E. 4459

Both platforms at Stanley Avenue (Cyclone Station) were extended south 32 feet using standard low fill platform construction.

Both platforms at 16th. Street were retired.

CONSTRUCTION OF BRIDGE - HAWTHORNE DRIVE, RACINE - A.F.E. 4437

Work is about 98% completed on the construction of a reinforced concrete bridge replacing the timber trestle at this location. The bridge was built one-half at a time with train operation on temporary gauntlet tracks governed by fixed signals. Signal work and the major part of the track work was done by Company forces and the Herlihy Mid-Continent Company built the bridge. A total of 9 side dump cars and 25 $\frac{1}{2}$  gondola cars of gravel were unloaded by Company forces for filling back of the abutments. Work remaining consists of a small amount of back-filling and the removal of the old bridge stringers and ties.

BRIDGE AND BUILDING DIVISION  
ADDITIONS AND BETTERMENTS - CONTINUED

CONSTRUCTION OF BRIDGE - DREXEL BOULEVARD - A.F.E. 4436

A reinforced concrete bridge, similar to the one built at Hawthorne Drive, was constructed at Drexel Boulevard by the Herlihy Mid-Continent Company. The methods of construction and train operation were the same as at Racine. A total of  $6\frac{1}{2}$  gondola cars of gravel backfill was placed. The same amount of work remains to be done as is shown for Racine.

REHABILITATION OF BRIDGES AND CULVERTS - A.F.E. 4433

Under this A.F.E. the following work was done by Henry Danischefsky:

ROOT RIVER BRIDGE

All steel work sand blasted and painted one coat of red lead paint and a finish coat of black paint.

COLLEGE AVENUE BRIDGE

All steel work cleaned, spotted, and painted two coats. All defective concrete was replaced in piers and abutments.

LAYTON AVENUE BRIDGE

All steel work cleaned and painted one coat of Texaco rust-proof compound.

C.M.St.P. & P. Ry. BRIDGE

Completed painting started in 1943. All steel work cleaned, spotted, and painted two coats.

CULVERT REPAIRS

Defective concrete was removed from walls, floors, roofs, head walls and wing walls of 6 culverts and replaced with new concrete to the original section. Sidewalls and exposed wing walls were given one coat of waterproofing. The following culverts were repaired:

5' x 5'	- South of Layton Avenue
8' x 4'	- South of Oakwood Road
8' x $3\frac{1}{2}$ '	- North of Caledonia Road
6' x 6'	- North of 5-Mile Road
4' x 4'	- South of 3-Mile Road
7' x 7'	- South of 3-Mile Road

BRIDGE AND BUILDING DIVISION  
ADDITIONS AND BETTERMENTS - CONTINUED

A.F.E. 4433 - CONTINUED

CULVERT REPAIRS - CONTINUED

Extensive repairs were made to the double 9' x 9' culvert north of Layton Avenue. All defective concrete in walls and roof was repaired. A new concrete floor was placed in the south barrel. The east end of this culvert was extended 10 feet and new wing walls built. Interior of sidewalls and all new concrete was given one coat of waterproofing.

HOWARD AVENUE OVERWAY

The east parapet wall and abutment of this bridge were repaired and adjusted for expansion of the floor beams. One railing pipe was replaced and the roadway resurfaced with asphalt.

KINNICKINNIE CULVERT

Drain tile was installed and covered with gravel behind the new wing walls of this culvert.

COLLEGE AVENUE SUBSTATION

The brick parapet walls on this building were torn down and rebuilt and a new 3-ply asphalt roof applied.

CONSTRUCTION OF GARAGE-COOK COAL YARD - MILWAUKEE - A.F.E. 4508

Following a serious fire in the yard occupied by the Henry Cook Coal Company on south Sixth Street at Cleveland Avenue a contract was let to Henry Danischefsky for construction of a garage and other work as follows:

The old timber coal storage building, which had been destroyed by the fire, was taken down and removed.

The south half of the yard was graded down to a maximum depth of 3 feet. A total of 666 cubic yards was removed and used for filling an old machinery pit on the premises and for filling behind the east wing walls of the Kinnickinnie Culvert.

A garage building, 46'-8" x 25' was erected at the south end of the yard. Construction is of concrete block with a concrete floor and a precast U.S. Gypsum roof. Overhead doors remain to be installed.

BRIDGE AND BUILDING DIVISION  
ADDITIONS AND BETTERMENTS - CONTINUED

A.F.E. 4433 - CONTINUED

CONSTRUCTION OF GARAGE-COOK COAL YARD-MILWAUKEE-A.F.E. 4508-CONTINUED

A cement block addition 9'-6" x 6' was built on the south side of the office and toilet and washbowl installed. Sewer and water lines were brought in from South Sixth Street.

A wooden stairway was built from the ground to the top of the coal trestle.

The coal bins under the trestle were repaired.

ADDITION TO MILWAUKEE BARN - A.F.E. 4488

Work was started, by Henry Danischefsky, on the construction of a fire-proof storehouse, oil house, and garage on the north side of the Milwaukee Barn, east of and adjoining the Substation. At the end of the year the site had been graded and the concrete footings poured.

BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

BRIDGES AND TRESTLES

The following repairs were made by Company Forces:-

OAK CREEK - Renewed 7 piles and 5 caps.

PUETZ ROAD - Renewed 1 cap, 16 stringers, 37 ties, and 2 guard rails.

MAHN OVERWAY - Renewed 12 piles, 3 caps, and 4 braces. Replaced 90% of the floor joists, repaired the deck, railings, guard rails, and wing fences.

LAYTON AVENUE - Renewed 3 piles, 1 cap, and 14 ties.

HARRISON STREET COAL TRESTLE - Renewed 2 caps, 7 stringers, 31 ties, and 3 guard rails. Repaired sidewalks and railings.

MUTUAL COAL TRESTLE - VINE AVENUE - Renewed 18 piles, 4 caps, 5 braces, 5 mud sills, 14 stringers, and 44 ties.

E.J. & E. RY. - RONDOUT - Renewed 102 ties and 14 guard rails.

C.M. STP & P. RY. - RONDOUT - Renewed 57 ties and 11 guard rails.

The following repairs were made by the Herlihy Mid-Continent Company:-

RONDOUT - Defective concrete in the C.M. St. P. & P. Ry. Bridge and in the Highway Arch was removed and replaced and the entire exposed surface given a water-proof cement coating.

## BRIDGE AND BUILDING DIVISION

### MAINTENANCE WORK

#### BUILDINGS AND PLATFORMS

In addition to minor repairs to buildings and platforms on the system the following major items were done:-

A standard 16 foot shelter was erected on the south bound platform at Dempster Street.

A frame garage, 10' x 20', was built at Glen-ayre.

Small storage rooms were built in the following Skokie Valley Stations:- Northfield, Northbrook, Woodridge, Highmoor, Sheridan Elms, and Deerpath. These rooms are in the space designed for concession use between the Agent's quarters and the waiting room. Construction is of Pyrobar block plastered to match the interior of the Station.

At Downey's Station, Skokie Valley Line, the following work was done:-

Moved the North Bound Shelter East 5 feet and widened the platform.

Extended the South Bound Platform 150 feet south using cinders spread level with the tops of the ties.

Moved the Concession Clerks' dressing facilities from the first floor to the basement of the Station.

Installed shower stall and water heating facilities in Trainmen's Room at Pettibone Yard.

The Pickus Construction Company installed a colored cement floor in the Men's Washroom at Edison Court. The same contractor rebuilt the concrete sidewalks and driveway approaches at Edison Court and 125 feet of sidewalk at Grand Avenue.

Renewed the water line going into the Edison Court Station.

Installed a standard "H" type shelter on the North Bound Platform at Glen Flora.

Raised and rebuilt the concrete sidewalks at 60th Street, Kenosha. This work was done by contract by Alfred Jensen of Kenosha.

Graded the property back of the Racine Station and surfaced with screenings for a Parking Space for Patrons.

BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

BUILDINGS AND PLATFORMS - CONTINUED

At Racine Station constructed a Store Room for the Concession by building a Pyrobar partition in the old Roadmaster's Office.

Surfaced with blacktop the Taxi-Cab Driveway at Racine Station.

Henry Danischewsky made extensive repairs to Ryan Tower following a fire there.

At Milwaukee Barns defective brickwork was repaired and pointed and all downspouts renewed by Henry Danischewsky. A four-ply built-up asphalt roof was applied to the barn and substation by the F. J. A. Christiansen Roofing Company.

At the exit from the concourse to the station platform at Milwaukee Terminal installed a set of sliding doors replacing two swinging doors.

Constructed a low-fill platform, 6' x 56', for South Bound traffic, on the private right-of-way south of Scott Street, Milwaukee.

Replaced gate shanty at Elm Place, Highland Park with a larger one built of plywood.

Installed Pyrobar block partition in basement of new addition to Highwood Office Building to separate Record Room from space occupied by Ticket Accounting Department.

At Sacred Heart constructed a standard "H" type shelter on the North Bound Platform and installed 248 lineal feet of inter-track fence. The platforms were surfaced with asphalt by contract.

An inter-track fence was built at North Chicago Junction, Shore Line Division, using 42 inch wire mesh fencing on wood posts.

Remodeled office space on second floor of North Chicago Barn to provide accommodations for Women City Car Operators.

Installed new toilet and washroom facilities in the Trainmen's Room at Waukegan Terminal. This work was done by the T. J. Killian Company.

Installed a metal folding gate at Mundelein Station closing the main Waiting Room off from the part containing the toilets.

BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

MACHINE SHOP

Repaired 13 frogs and 5 switch points.

Overhauled 4 Section Gang motor cars, 3 Signal Gang speeders and 6 push cars. Made running repairs to all motor cars, speeders, and push cars on the system.

Maintained all Way Department tools and work equipment.

Made and repaired parts for Signal and Interlocking Division.

Cut bars and pins and welded parts for Mechanical Department.

TIN SHOP

Performed all necessary work required by repairs to buildings and heating plants.

Made water coolers, flush tanks, water supply tanks, card holders, toilet chutes, destination box panels, car heater magazines, roof flanges, roof jacks and ventilators, and did other work requested by the Mechanical Department.

## BRIDGE AND BUILDING DIVISION

### MAINTENANCE WORK

#### MISCELLANEOUS

Maintained stations in Chicago at Adams and Wabash, Wilson Avenue, and Howard Street. Maintained Montrose Freight Station and South State Street Baggage Room.

Operated steam heating plants at Wilson Avenue Station, Highwood Office, North Chicago Barn, Waukegan Garage and Milwaukee Barn.

Repaired asphalt crossings on the entire system,

Operated the Weed Killer.

Operated the American Ditcher as required for loading and unloading rail, scrap, cinders, ballast, and coal.

Repaired Company owned houses and buildings as requested by the Real Estate Department.

Rebuilt Right-of-way fence as follows:-

North of Oakton Street - East Side	380 ft.
North of 22nd Street, West Line - East Side	660 ft.
E.J. & E. Ry. to 19th St., West Line - West Side	1000 ft.
North of 14th Street, East Line - East Side	1560 ft.
North of Ridgeland Avenue - East Side	330 ft.
North of Winthrop Harbor Road - West Side	330 ft.
West of Wheeler Road - South Side	<u>990 ft.</u>

Total Right-of-way Fence Rebuilt 5250 ft.

BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

BUILDINGS PAINTED

<u>LOCATION</u>	<u>DESCRIPTION</u>
Adams & Wabash Station	Painted Outside
	Washed Inside, Varnished Trim, Cleaned Terrazzo
Harmswoods Station	Painted Inside
Glenayre Station	Painted Inside
Woodridge Station	Painted Inside
Briergate Station	Painted Inside
Highmoor Station	Painted Inside
Sheridan Elms Station	Painted Inside
Deerpath Station	Painted Inside
Downeys Station	Painted Inside
North Chicago Junction Station	Painted Inside
North Chicago M.D. Station	Painted Office
Ridgeland Avenue	Painted Shelter
Glen Flora Avenue	Painted Shelter
Church Street Station	Painted Inside
Wilmette Avenue Station	Washed Inside
Elm Street, Winnetka, Station	Painted Inside
Highwood Office	Painted Outside
Highwood Trainmen's Building	Painted Inside
Fort Sheridan Station	Painted Inside
Lake Bluff Station	Painted Inside
Great Lakes Station	Painted Inside
North Chicago Barn	Painted Offices
Waukegan Trainmen's Building	Painted Inside
Waukegan Terminal	Painted Inside
South Upton Tower	Painted Outside
Knollwood	Painted Shelter
Rondout Scale House	Painted Outside
Rondout M.D. Station	Painted Outside
Arcady Station	Painted Outside
Thornbury Village	Painted Shelter
4th Street, Libertyville	Painted Shelter
Libertyville Section House	Painted Outside
Libertyville M.D. Station	Painted Outside
Libertyville Station & Shelter	Painted Outside
Garfield Avenue	Painted 2 Shelters
Perpetual Adoration Convent	Painted Shelter
Mundelein M.D. Station	Painted Outside
Kenosha Station & Shelter	Painted Inside & Outside
Racine Station	Painted Inside
Harrison Street Station	Painted Inside

BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

BUILDINGS PAINTED - CONTINUED

COMPANY HOUSES DECORATED

LOCATION

DESCRIPTION

Northbrook  
1143 Greenleaf Avenue, Wilmette  
550 Lincoln Avenue, Winnetka  
532 N. Genesee Street, Waukegan  
6605 - 28th Avenue, Kenosha

Painted Inside  
Painted Inside  
Painted Inside  
Painted & Papered Inside  
Painted & Papered Inside

SIGNAL AND INTERLOCKING DIVISION

ADDITIONS AND BETTERMENTS

INSTALLATION OF FLASHER SIGNAL AT GROSS POINT ROAD - A.F.E. 4481

A standard automatic flashing light signal was installed east of the tracks at Gross Point Road replacing a wig-wag crossing signal. This is the first item in a proposed crossing improvement program at this location which is to be paid for largely by Cook County.

INSTALLATION OF WIG-WAG SIGNAL - BROADWAY, NORTH CHICAGO - A.F.E. 4480

The wig-wag signal retired from Gross Point Road was installed east of the tracks at Broadway, North Chicago.

REPAIRS TO CONCRETE SIGNAL BASES - A.F.E. 4446

Defective concrete bases of signal apparatus from 22nd Street, North Chicago, to Glen Flora Crossover were repaired by the Richard T. Jenkins Company, Sub-Contractors, for the Monroe Electric Company. A total of 25 bases was repaired.

INSTALLATION OF BLOCK SIGNAL SYSTEM - A.F.E. 4506 and 4507

Work was started by Knott & Mielly, Contractors, on the installation of a block signal system extending from Winthrop Harbor to Kenosha Tower and from Ryan Tower to Harrison Street, Milwaukee. At the end of the year about 50% of the impedance bonds, 40% of the pipe conduit, boot-legs and local cable, 2680 feet of line cable, 6-2300 volt transformers and all concrete bases had been installed in the Winthrop Harbor to Kenosha section. No work was done between Ryan Tower and Harrison Street.

## SIGNAL AND INTERLOCKING DIVISION

### MAINTENANCE WORK

In addition to the routine work of maintaining interlocking plants, block signals and crossing protection devices the following major items of work were done and charged to Operating Accounts:-

At South Upton and K.O. Interlocking Plants the lenses in the marker lights were changed from white to lunar white.

A third light was installed at the tip of all street arms of automatic gates at Green Bay Road, Glencoe and Highwood Avenue, Highwood. This light is controlled by a mercury switch and burns steadily while gate arm is in down position.

The North-East automatic gate pedestal at Belvidere Street was renewed after being damaged in a train-auto collision.

One automatic gate pedestal at 14th Street, North Chicago, was replaced and taken to the shop for overhauling.

The interlocking pipe lines and foundations at Kenosha Tower were raised and leveled following ballasting operations through this district. The pipe line through the 60th Street Crossing was renewed.

All wiring inside the Tower at Ryan Plant was renewed following a fire on November First.

Manually controlled signals governing single track operation during rail and ballast work between Zion and Winthrop Harbor and between Racine Quarry and Oak Creek were installed as needed. At the end of the working season these signals were removed.

A temporary, manually operated signal system was installed at Drexel Boulevard to control train movements through the Gauntlet track during the construction of a new concrete bridge. ~~later this system~~, as well as the one installed at Hawthorne Drive, Racine, in 1943, was changed to fixed position signals with all Home Signals showing RED.

SIGNAL AND INTERLOCKING DIVISION

MAINTENANCE WORK

CROSSING GATE OPERATION

57 Automatic Gate Locations, including Middle Road

	<u>1944</u>	<u>1943</u>
gates broken by automobiles	95	103
Other interruptions*	343	302

20 Manually Operated Crossing Gate Locations

Gates broken by automobiles	20	33
Other interruptions*	50	104

\*Includes interruptions due to power failures, blown fuses, mechanical failures, frosted contacts, line trouble, track circuit trouble, sleet, etc.

CROSSING GATES AND SIGNALS MAINTAINED

Automatic Gates	54	54
Automatic Gates & Flashers	3	3
Manual Gates	20	20
Flasher Signals	5	4
Autoflags - Track Circuit	16	17
Autoflags - Manual Control	3	3
Block Signals - S.T. Miles	84.1	84.1
Switch Protection Signals	7	7
Fire Crossing Signals	4	4
Interlocking plants	5	5
Smash Gates	3	3

## EQUIPMENT

### PURCHASE OF WEED MOWING MACHINE - A.F.E. 4426

A Fairmont-Rawls gasoline-powered weed mowing machine mounted on a push car was purchased for cutting weeds on the track shoulders and along sidings. This machine is pulled by a track motor car.

Miscellaneous equipment purchased during the year included 1 gasoline-powered Nordberg rail drilling machine and 1 Barco Tytamper.

WAY and STRUCTURES SUMMARY

	<u>1944</u>	<u>1943</u>
<u>Track Construction - Lineal Feet</u>		
Side Track Constructed	22	1,898
Side Track Retired	-	232

	<u>Rail Installed - Single Track Feet</u>	
127#	-	406
102#	496	532
100#	66,478	48,498
80#	7,174	21,460
65#	-	295
Total	74,148	71,191

	<u>Rail Removed - Single Track Feet</u>	
95#	496	938
80#	66,478	48,498
65#	7,152	20,089
Total	74,126	69,525

	<u>Tie Plates Installed</u>	
100#	19,092	14,927
80# x 100# - New	5,354	18,164
80# x 100# - Second Hand	18,721	-
Total	43,167	33,091

	<u>Angle Bars Renewed - Pairs</u>
100#	3,337

SUMMARY - Continued

	<u>1944</u>	<u>1943</u>
<u>Special Work</u>		
Crossovers Installed	-	1
Crossovers Removed	-	1
Turnouts Installed	-	1
Turnouts Removed	-	1
Crossings Built Up	-	2
Trogs Repaired	13	18
Switch Points Repaired	5	23
Thermit Welds	282	400

	<u>Ties Renewed</u>	
Main Line	24,853	21,452
Side Track	923	3,161
Switch	775	839
Bridge	335	6
3rd Rail	-	670
Total	26,886	26,128

	<u>Ties Installed on New Work</u>	
Side Track - New	12	362
Switch - New	-	287

	<u>Ballast - Cars</u>	
Stone	646	236
Gravel	576	141

	<u>Broken Rails</u>	
100#	1	3
80#	22	16
65#	-	13

SUMMARY - Continued

	<u>1944</u>	<u>1943</u>
<u>Crossings</u>		
Concrete Slab Crossings Installed	2	-
Gumwood Crossings Installed	3	2
Asphalt Crossings Rebuilt	4	7
Plank Crossings Rebuilt	16	5
 <u>Bridge Repairs</u>		
Bridges Repaired	12	12
Culverts Repaired	7	-
Bridges Painted	4	8
 <u>Painting</u>		
Buildings - - Painted and Decorated	43	60
Company Houses Painted and Decorated	5	17
 <u>Crossing Protection</u>		
Automatic Flashers Installed - Locations	1	-
Autoflags Retired - Locations	1	-
Automatic Gates Damaged by Automobiles	95	103
Manual Gates Damaged by Automobiles	20	33
 <u>Fencing</u>		
Right-of-Way Fence Rebuilt -	5,250	3,500
 <u>Weed Killer</u>		
One Application - Single Track Miles	200	200
Total Solution Used - Gallons	42,000	37,500
 <u>Carload Material</u>		
Sand and Stone	1,278	473
Coal	38	29
Ties	84	80
Cinders	103	159
Miscellaneous	80	70
	<u>1,583</u>	<u>811</u>

## ELECTRIC POWER SERVICE DIVISION

### ADDITIONS AND BETTERMENTS

On September 2, 1943 a contract was entered into with the Monroe Electric Company "To construct, renew and repair certain electrical facilities between Chicago, Illinois and Milwaukee, Wisconsin" and to do such additional work as might be ordered from time to time by the Chief Engineer. Work was started in September, 1943 and completed November 30, 1944. The following is a description of the work done:

#### Installation of Ground Rods on Catenary Structures - A.F.E. 44

3/4" x 8'-0" galvanized ground rods were installed and connected to the steel frame of each catenary structure from Bridge M-4 at 22nd Street, North Chicago to Bridge M-102 near Greenwood Avenue, Waukegan. A total of 98 ground rods was installed.

#### Installation of Catenary Overhead Construction - North Chicago to Waukegan - A.F.E. 4439

A standard catenary overhead system was constructed on existing steel catenary bridges from Bridge M-9 at Broadway Street, North Chicago to Bridge M-102 near Greenwood Avenue, Waukegan. Work consisted of stringing new primary messenger cable over each main line track, transferring 600 volt feeder cable from wood pole line and suspending from primary messenger cable to become the secondary messenger cable, installing auxiliary messenger cable over and beyond each crossover and siding turnout and suspending the existing trolley wire from the new secondary and auxiliary messenger cables. Old wood poles, cross spans and back guys were removed.

A new, single wire, open, 600 volt lighting main was installed on steel cross arms on risers of catenary bridges from Bridge M-4, north of 22nd Street, North Chicago to Bridge M-102 near Greenwood Avenue, Waukegan.

72 wood pole stubs were removed between Lake Bluff and North Chicago Junction on the Skokie Valley Line.

ELECTRIC POWER SERVICE DIVISION

ADDITIONS AND BETTERMENTS - CONTINUED

Install New Telephone Cable in Waukegan - A.F.E. 4440

A new 26 pair, 19 gage aerial telephone cable was installed from Catenary Bridge M-38, north of 10th Street, Waukegan, to Catenary Bridge M-64, south of Washington Street, Waukegan. The new cable is suspended by metal hangers from a new 3/8" messenger wire fastened to the steel catenary bridges. Two existing 2-wire open telephone lines, located on the existing wood trolley poles, were retired together with their attendant cross-arms, insulators and drops.

Removal of Transmission Lines in Illinois - A.F.E. 4441

Retired a 3-wire transmission line on the Libertyville Branch from South Upton Tower to the Libertyville passenger station and a 1-wire transmission line from Blodgett Avenue, Lake Bluff, Skokie Valley Line, to the North Chicago Switch Railway Crossing, south of 22nd Street, North Chicago, East Line, together with insulators, cross-arms and fittings.

Install New Telephone Cable - Libertyville Branch - A.F.E. 4442

Installed a new 10 pair, 19 gage, paper insulated, lead covered telephone cable on messenger wire, suspended from wood trolley poles, between Catenary Bridge 27, west of South Upton Tower and Liberty Lake Substation. Two existing 2-wire open telephone lines between the same points were retired.

Renewal of Telephone Lines - Waukegan to 3-Mile Road.  
A.F.E. 4443 and 4444.

Installed two circuits of #6 copperweld wire on new and existing 6 pin cross-arms from Catenary Bridge M-64 at Edison Court, Waukegan; to 3-Mile Road, excepting approximately 2200 feet at McKeon Road and 2200 feet at Burlington Road. 39 steel risers were installed on the catenary bridges north of Edison Court in order to support the cross-arms. This installation replaces two circuits of #12 wire.

ELECTRIC POWER SERVICE DIVISION  
ADDITIONS AND BETTERMENTS - CONTINUED

2300 Volt Transmission Line - Wisconsin - A.F.E. 4445

Installed a new 2-wire, 2300 volt transmission line from the State Line to 75th Street, Kenosha and from South Milwaukee Road to Austin Avenue, Milwaukee. New and second-hand wire was used on new crossarms; higher poles were installed, where necessary, in order to obtain proper clearances. This line is to provide the power supply for automatic block signals.

Repair of Concrete Catenary Bridge Bases - North Chicago to Waukegan - A.F.E. 4446

Defective concrete bases of catenary bridges from 22nd Street, North Chicago, to Greenwood Avenue, Waukegan, were repaired by a Sub-Contractor, the Richard T. Jenkins Company. A total of 69 bases was repaired.

Painting Catenary Bridges and Bates Poles - A.F.E. 4447 & 4448

Cleaned and painted structural steel parts of 320 catenary bridges and 13 Bates poles from Bridge No. 0 at East Prairie Road to Bridge 283-2 south of Glenayre and from Bridge 138-1 north of Deerpath to Bridge M-102 near Greenwood Avenue, Waukegan, including all catenary bridges at South Upton and the Bates poles east of Green Bay Road on the Libertyville Branch.

Work consisted of cleaning the steel, spot coating all bolts and rust spots and painting the entire structure one prime coat and one finish coat. Catenary bridge numbers were painted on all bridges involved. All base bolt castings were removed, painted and replaced.

This work was done by a Sub-Contractor, The Industrial Painting Company.

Telephone Line Renewal and Extension - Libertyville Branch - A.F.E. 4503.

Renewed #12 wire in commercial line from 4th Street, Libertyville to Saint Mary's Station and in dispatch line from Dymond Road to Mundelein Station with #8 wire salvaged from other locations. Extended commercial line from Saint Mary's Station to Mundelein Station with #8 salvaged wire.

ELECTRIC POWER SERVICE DIVISION

Maintenance Work

In addition to the routine work of this division the following major items of maintenance work were done:

Installed a reconditioned 500 K.W. rotary converter in McKeon Substation. This machine is operated manually during period of heavy load on Saturdays and Sundays.

Renewed 264 wood poles, 500 feeder cross-arms and 391 - 45000 volt transmission line insulators over the system.

Renewed 5,346 - 400,000 C.M. rail bonds including those installed on rail renewals.

Renewed 6.42 miles of 4/0 trolley wire over the system.

POWER STATISTICS FOR YEAR 1944

Power Distribution

Wisconsin exclusive of Milw. City			
Milwaukee City	K.W.H.	12,106,808	1944
Wisconsin including Milw. City	K.W.H.	1,362,467	1943
Milw. D.C. Furnished by Wisc. Elect. Pwr. Co.	K.W.H.	13,469,275	
Wisconsin D.C. Furnished by Winthrop Harbor	K.W.H.	1,353,996	
Wisconsin Total	K.W.H.	426,228	
Illinois	K.W.H.	<del>15,299,999</del>	
Total Purchased	K.W.H.	<del>36,695,492</del>	
	K.W.H.	14,443,723	
	A.C.	36,986,084	
	A.C.	51,429,807	
	A.C.		
	A.C.		
	D.C.		
	D.C.		
	D.C.		
	A.C. & D.C.		
	A.C. & D.C.		
	A.C. & D.C.		

Average monthly demand for year in K.W.  
A.C. & D.C. K.W.H. purchased on demand charge basis  
Load factor for year  
Car Miles Operated on North Shore power

11,907	11,698
49,484,733	48,888,246
473	477
11,371,971	11,248,796

ELECTRIC POWER SERVICE DIVISION

COST OF ELECTRICAL ENERGY PER CAR MILE

K.W.H. - C.N.S.& M.R.R. CO. AND C.& M.E.RY. CO.

January	4,733,042
February	4,536,645
March	4,923,462
April	4,347,347
May	4,557,999
June	4,290,441
July	4,356,503
August	4,471,704
September	4,061,499
October	4,459,520
November	2,436,412
December	4,770,417

Total - 51,944,991

CAR MILES OPERATED

January	956,391
February	906,773
March	985,591
April	977,424
May	1,015,018
June	1,006,171
July	1,060,211
August	1,046,366
September	976,801
October	992,758
November	447,799
December	1,000,668

Total - 11,371,971

Cost of Power for Year 1944 - Account 59 \$661,422.84  
Total Car Miles Operated on North Shore Power 11,371,971  
 $\$661,422.84 \div 51,944,991 \text{ KWH} = 1.273\% \text{ per KWH}$   
 $51,944,991 \div 11,371,971 = 4.568 \text{ KWH per Car Mile}$   
 $4.568 \times 1.273\% = 5.815\% \text{ per Car Mile - Account 59}$   
Cost of Electric Energy per Car Mile at Substation A.C. & D.C. \$.05815  
Cost of Electric Energy per Car Mile at Substation D.C. Bus \$.06537

NOTE: The above costs do not include interest on investment, insurance, depreciation, or taxes.

# COST OF ELECTRICAL ENERGY FOR YEAR 1944

	<u>P.S. D.C.</u>	<u>P.S. A.C.</u>	<u>Wis.Elec. Co. A.C.</u>	<u>Wis.Elec.Co. D.C.</u>	<u>Wells St. D.C.</u>	<u>Calvary D.C.</u>
Jan. \$	43,569.67	\$ 5,361.83	\$ 7,841.95	\$ 1,554.00	\$ 50.88	\$ 854.12
Feb.	42,384.65	5,581.54	7,607.66	1,497.00	49.04	822.48
Mar.	44,184.41	5,927.82	7,864.69	1,524.00	49.32	872.20
Apr.	40,292.89	5,515.24	7,429.00	1,489.50	47.67	1,011.75
May	41,045.78	5,427.98	7,594.80	1,149.00	47.58	1,087.00
June	38,958.84	5,550.75	7,332.78	994.50	44.90	1,110.94
July	39,784.53	5,633.77	7,437.70	1,024.50	45.93	1,235.20
Aug.	40,227.20	5,625.80	7,389.86	1,054.50	46.43	994.89
Sept.	38,961.40	5,121.20	7,049.85	1,026.90	45.26	871.77
Oct.	40,788.15	5,279.65	7,345.22	1,329.00	46.65	1,006.63
*Nov.	32,259.15	4,092.02	4,649.59	1,124.23	45.56	681.65
Dec.	43,655.14	6,449.15	8,124.05	1,801.50	46.88	924.37
	\$486,111.81	\$65,566.75	\$87,667.15	\$15,568.63	\$566.10	\$11,473.00

Cost per D.C. K.W.H. Public Service Company contract -  
 $\$486,111.81 \div 36,015,558 = 1.35$  Cents per K.W.H.

Cost per A.C. K.W.H. Public Service Company contract -  
 $\$65,566.75 \div 5,604,563 = 1.169$  cents per K.W.H.

Cost per A.C. K.W.H. Wisconsin Electric Power Company contract -  
 $\$87,667.15 \div 7,864,712 \text{ K.W.H.} = 1.114$  cents per K.W.H.

Cost per D.C. K.W.H. Wisconsin Electric Power Company contract -  
 $\$16,134.73 \div 1,353,996 = 1.191$  cents per K.W.H.

Cost per D.C. K.W.H. Chicago Rapid Transit Company contract -  
 $\$11,473.00 \div 1,106,162 = 1.037$  cents per K.W.H.

Average cost per K.W.H. system -  
 $\$666,953.44 \div 51,944,991 = 1.283$  cents per K.W.H.

\* No main line train operation November 10 to 26, inclusive, due to strike of trainmen.

# POWER SUMMARY - YEAR 1944

2,660,640	No. 30 Skokie	D.C.
945,020	No. 31 Lake Ave.	D.C.
1,436,774	No. 32 Kotz Rd.	D.C.
457,650	No. 33 Deerfield Rd.	D.C.
1,427,414	No. 34 Old Mill Rd.	D.C.
686,430	No. 35 Laurel Ave.	D.C.
841,196	No. 36 Libertyville	D.C.
1,484,162	No. 37 Central St.	D.C.
3,472,480	No. 38 Winnetka	D.C.
3,589,534	No. 39 Ravinia	D.C.
3,837,744	No. 40 Ft. Sheridan	D.C.
2,154,000	No. 42 No. Chicago NS.	D.C.
2,555,870	A24 No. Chicago P.S.	D.C.
2,433,590	No. 43 Waukegan	D.C.
486,562	No. 44 Beach	D.C.
1,278,522	No. 45 Winthrop Harbor	D.C.
5,598,680	No. 80 Lake Bluff	D.C.
163,500	Highwood Shops	
48,768	Waukegan Garage	
188,400	Skokie Shops - Oakton Street	
110,700	Glencoe and Kenilworth Signals	
75,332	Howard Street Station	
82,580	Zion and Waukegan Signals	
36,015,558	Public Service Company Billings	D.C.
1,106,162	C.R.T. Co. Calvary	D.C.
37,121,720	Total Purchased, Illinois	D.C.
426,228	Winthrop Harbor to Wisconsin	D.C.
36,695,492	Total - Illinois	D.C.
5,604,563	Public Service Company	A.C.
42,300,055	Total - Illinois	D.C. & A.C.
7,864,712	Wisconsin Electric Company	A.C.
1,353,996	Wisconsin Electric Company	D.C.
426,228	Winthrop Harbor to Wisconsin	D.C.
51,944,991	Total A.C. and D.C. Purchased	

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922,500	McKeown Substation	D.C.
1,191,700	Kenosha Substation	D.C.
626,259	Bose Rd. Substation	D.C.
1,473,600	Racine Substation	D.C.
566,628	Quarry Substation	D.C.
803,965	4-Mile Substation	D.C.
1,364,600	Carrollville Substation	D.C.
838,600	College Ave. Substation	D.C.
2,729,500	Milwaukee Substation	D.C.
10,517,352	Total Converted in Wisconsin	D.C.
426,228	Winthrop Harbor to Wisconsin	D.C.
1,353,996	Wisconsin Electric Company	D.C.
12,297,576	Total to Wisconsin	D.C.
13,469,275	K.W.H. Wisconsin	A.C.
1,362,467	Milwaukee City	A.C.
12,106,808	K.W.H. A.C. to Wisconsin exclusive of Milwaukee City	
426,229	K.W.H. D.C. to Wisconsin	
12,533,037	K.W.H. to Wisconsin Exclusive of Milwaukee City	

K.W.H. PURCHASED - YEAR 1944

	<u>P.S. D.C.</u>	<u>P.S. A.C.</u>	<u>D.C. C.R.T. Co.</u>
Jan.	3,315,866	482,500	91,038
Feb.	3,167,694	472,600	86,241
Mar.	3,447,179	550,100	93,263
Apr.	2,992,303	462,800	97,396
May	3,164,275	495,700	100,994
June	2,968,073	475,400	100,283
July	3,001,631	468,815	110,999
Aug.	3,105,660	504,248	90,272
Sept.	2,813,053	445,500	76,991
Oct.	3,099,816	483,700	94,227
*Nov.	1,700,094	235,100	63,676
Dec.	<u>3,239,914</u>	<u>528,100</u>	<u>100,782</u>
	36,015,558	5,604,563	1,106,162

	<u>Wisc. Elect. Power Co. A.C.</u>	<u>Wisc. Elect. Power Co. D.C.</u>	<u>Wells St.D.C.</u>	<u>Total Wisc. Elect. D.C.</u>
Jan.	709,050	129,500	5,088	134,588
Feb.	680,456	124,750	4,904	129,654
Mar.	700,988	127,000	4,932	131,932
Apr.	665,956	124,125	4,767	128,892
May	696,522	95,750	4,758	100,508
June	659,320	82,875	4,490	87,365
July	685,090	85,375	4,593	89,968
Aug.	679,006	87,875	4,643	92,518
Sept.	635,854	85,575	4,526	90,101
Oct.	666,362	110,750	4,665	115,415
*Nov.	339,300	93,686	4,556	98,242
Dec.	<u>746,808</u>	<u>150,125</u>	<u>4,687</u>	<u>154,812</u>
	7,864,712	1,297,386	56,609	1,352,995

\* No main line train operation  
November 10 to 26, inclusive  
due to strike of trainmen.

MILWAUKEE CITY LINE

Kilowatt Hours - D.C.

	<u>N.S. Feeder</u>	<u>Wisc. Elect. Co.</u>	<u>Wells St.</u>	<u>Total</u>
Jan.	96,610	129,500	5,088	231,198
Feb.	94,890	124,750	4,904	224,544
Mar.	94,170	127,000	4,932	226,102
Apr.	91,660	124,125	4,767	220,552
May	86,450	95,750	4,758	186,958
June	82,700	82,875	4,490	170,065
July	87,450	85,375	4,593	177,418
Aug.	85,740	87,875	4,643	178,258
Sept.	87,130	85,575	4,526	177,231
Oct.	90,060	110,750	4,665	205,475
*Nov.	50,050	93,686	4,556	148,292
Dec.	<u>111,360</u>	<u>150,125</u>	<u>4,687</u>	<u>266,172</u>
	1,058,270	1,297,386	56,609	2,412,265

Kilowatt Hours - A.C.

Jan.	124,177
Feb.	120,266
Mar.	123,421
Apr.	114,289
May	114,350
June	109,827
July	110,609
Aug.	110,488
Sept.	108,913
Oct.	114,726
Nov.	73,066
Dec.	<u>138,335</u>

1,362,467

Total D.C. K.W.H. to Milwaukee City - 1,058,270  
Total A.C. K.W.H. to Milwaukee City - 1,362,467  
Wisconsin ratio of conversion 77.7%

\* No main line train operation, November 10 to 26, inclusive  
due to strike of trainmen.

POWER STATISTICS FOR YEAR 1944

Illinois Substations D.C. Output in K.W.H.

	<u>Calvary</u>	<u>Niles No. 30</u>	<u>No. 31</u>	<u>No. 32</u>	<u>No. 33</u>
Jan.	91,038	253,945	83,425	117,637	45,065
Feb.	86,241	253,315	71,035	122,537	38,265
Mar.	93,263	262,745	81,085	126,177	43,865
Apr.	97,396	224,755	77,345	120,577	40,765
May	100,996	230,195	78,845	139,497	44,505
June	100,283	212,535	77,945	120,177	41,125
July	110,999	202,785	87,315	124,517	41,965
Aug.	90,272	223,385	95,965	125,717	43,385
Sept.	76,991	210,845	81,035	114,594	37,615
Oct.	94,227	224,235	83,555	127,237	39,525
*Nov.	63,676	115,045	42,985	63,687	13,735
Dec.	100,782	246,855	84,485	134,417	27,835
	1,106,162	2,660,640	945,020	1,436,774	457,650

	<u>No. 34</u>	<u>No. 35</u>	<u>No. 36</u>	<u>No. 37</u>	<u>No. 38</u>
Jan.	120,197	57,975	75,185	124,580	323,465
Feb.	123,867	49,205	65,945	110,600	308,765
Mar.	130,067	54,465	70,325	129,030	356,265
Apr.	118,527	57,975	60,155	120,330	299,965
May	128,887	60,845	57,505	136,860	322,465
June	117,787	60,515	71,601	124,050	299,465
July	119,877	63,335	73,875	135,177	293,365
Aug.	123,637	61,735	74,475	134,927	303,265
Sept.	116,767	55,095	70,625	122,227	274,765
Oct.	124,687	67,265	78,665	135,207	291,865
*Nov.	61,047	30,395	40,305	81,167	118,265
Dec.	142,067	67,625	92,535	130,007	280,565
	1,427,414	686,430	841,196	1,484,162	3,472,480

\* No main line train operation November 10 to 26, inclusive, due to strike of trainmen.

POWER STATISTICS FOR YEAR 1944

Illinois Substations D.C. Output in K.W.H.

	<u>No. 39</u>	<u>Ft. Sheridan</u>	<u>Lake Bluff</u>	<u>N.S. No. Chicago</u>
Jan.	326,937	389,437	497,260	269,000
Feb.	299,237	367,137	484,990	166,000
Mar.	332,437	409,237	494,600	237,260
Apr.	295,537	334,137	438,430	240,400
May	321,137	337,037	488,930	218,900
June	305,037	329,637	463,430	193,680
July	306,237	323,937	484,600	175,300
Aug.	322,537	312,837	489,930	229,060
Sept.	296,237	265,137	446,640	110,200
Oct.	321,937	295,437	480,040	124,100
*Nov.	151,437	147,337	344,900	52,700
Dec.	310,837	326,437	484,930	137,400
	3,589,534	3,837,744	5,598,680	2,154,000

	<u>P.S. No. Chicago</u>	<u>Pine St. Waukegan</u>	<u>Beach</u>	<u>W.Harbor</u>
Jan.	165,800	243,820	30,797	122,637
Feb.	263,680	234,910	33,087	110,737
Mar.	246,400	252,170	38,077	116,637
Apr.	172,290	204,970	40,757	90,537
May	182,230	204,990	43,997	107,837
June	190,300	134,340	69,249	113,837
July	229,790	90,310	101,860	103,900
Aug.	133,300	225,430	41,410	117,800
Sept.	228,790	201,620	24,307	106,200
Oct.	264,710	238,620	18,997	128,700
*Nov.	162,450	151,110	12,087	55,300
Dec.	316,130	251,300	31,957	102,400
	2,555,870	2,433,590	486,562	1,278,522

\* No main line train operation, November 10 to 26, inclusive, due to strike of trainmen.

# POWER STATISTICS FOR YEAR 1944

## Auxiliary Power Furnished Under D.C. Power Contract in K.W.H.

	<u>Highwood Shops</u>	<u>Waukegan Garage</u>	<u>Skokie Shops</u>	<u>Winnetka Signals</u>	<u>Howard St. Station</u>	<u>Signals N. Chgo. - State Line</u>
Jan.	13,600	5,704	22,200	11,900	7,460	7,840
Feb.	15,300	5,242	20,000	10,100	6,700	7,040
Mar.	15,600	5,297	20,700	10,200	7,060	7,480
Apr.	13,200	3,951	15,600	8,500	6,620	7,000
May	13,000	3,217	11,300	8,500	5,922	7,674
June	11,300	2,899	10,500	7,200	5,464	6,000
July	11,000	2,842	9,800	7,900	5,584	6,360
Aug.	12,100	3,202	11,500	8,100	5,594	6,369
Sept.	13,100	3,068	11,000	8,700	5,746	6,737
Oct.	14,300	4,008	13,000	10,000	6,226	7,500
*Nov.	13,700	4,396	18,300	8,400	5,926	5,420
Dec.	<u>17,300</u>	<u>4,942</u>	<u>24,500</u>	<u>11,200</u>	<u>7,030</u>	<u>7,160</u>
	163,500	48,768	188,400	110,700	75,332	82,580

Illinois Block Signals -	82,580
Oakton Shop -	188,400
Highwood Shop -	163,500
Waukegan Garage -	48,768
Howard St. Station -	75,332
Winnetka Signals -	<u>110,700</u>
Total Auxiliary	669,280

Public Service D.C. contract load factor .480%+

\*No main line train operation November 10 to 26  
due to strike of trainmen.

# POWER STATISTICS FOR YEAR 1944

## Wisconsin Substations D.C. Output in K.W.H.

	<u>McKeown</u>	<u>Kenosha</u>	<u>Bose Rd.</u>	<u>Racine</u>	<u>Quarry</u>
Jan.	65,500	105,790	69,020	121,700	53,340
Feb.	64,500	97,550	61,180	116,200	50,200
Mar.	83,000	99,100	72,800	122,500	48,880
Apr.	75,000	87,530	61,070	124,100	46,920
May	73,000	100,570	65,550	116,700	42,560
June	74,700	88,150	53,750	120,700	46,120
July	82,600	111,430	26,875	147,100	53,800
Aug.	89,400	96,200	50,584	131,800	51,000
Sept.	84,900	95,300	50,000	130,800	43,968
Oct.	88,700	127,850	13,780	161,200	43,050
*Nov.	30,100	48,970	30,920	56,900	20,650
Dec.	111,100	133,260	70,730	123,900	66,140
	922,500	1,191,700	626,259	1,473,600	566,628

	<u>4 Mile</u>	<u>Carrollville</u>	<u>College</u>	<u>Milwaukee</u>	<u>Wisc. Elec.Co.</u>	<u>Win.Harbor To Wisconsin</u>
Jan.	60,540	123,200	63,400	265,000	134,588	40,879
Feb.	61,120	126,200	76,100	257,100	129,654	36,912
Mar.	62,650	132,700	77,300	256,000	131,932	38,879
Apr.	60,870	137,500	81,900	231,000	128,892	30,179
May	96,015	118,800	77,000	211,800	100,508	35,946
June	72,220	123,700	76,100	198,700	87,365	38,000
July	72,030	128,200	81,300	211,200	89,968	34,633
Aug.	72,610	124,800	82,000	220,300	92,518	39,267
Sept.	73,980	84,700	62,400	218,500	90,101	36,067
Oct.	68,450	98,700	60,900	240,000	115,415	42,900
*Nov.	32,020	39,200	25,500	110,100	98,242	18,433
Dec.	71,460	126,900	64,700	309,800	154,813	34,133
	803,965	1,364,600	838,600	2,729,500	1,353,996	426,228

Total converted in Wisconsin - 10,517,352 K.W.H.

\*No main line train service Nov. 10 to 26, inclusive, due to strike of trainmen.

POWER STATISTICS FOR YEAR 1944

A.C. Power Furnished in Wisconsin in K.W.H.

	<u>W. Harbor</u>	<u>Beach</u>	<u>Milwaukee</u>
Jan.	152,900	329,600	709,050
Feb.	143,700	328,900	680,456
Mar.	144,400	405,700	700,988
Apr.	122,600	340,200	665,956
May	147,000	348,700	696,522
June	139,200	336,200	659,320
July	156,100	312,715	685,090
Aug.	145,448	358,800	679,006
Sept.	135,600	309,900	635,854
Oct.	177,500	306,200	666,362
*Nov.	74,400	160,700	339,300
Dec.	136,900	391,200	746,808
	<u>1,675,748</u>	<u>3,928,815</u>	<u>7,864,712</u>

Input A.C. K.W.H. - 13,469,285  
Output D.C. K.W.H. - 10,517,352  
Efficiency 77.7%

Public Service Company A.C. contract load factor for 1944 - .349  
Wisc. Electric Power Co. A.C. contract load factor for 1944- .589

\*No main line train operation November 10 to 26, inclusive  
due to strike of trainmen.

# POWER STATISTICS FOR YEAR 1944

## Monthly K.W. Demand - Illinois Stations

	No. 30 Skokie	#31	Signals #32	Power #32	#33	Signals #34
Jan.	663.3	340.	21.3	440.	113.3	18.2
Feb.	763.3	283.3	18.2	483.3	133.3	15.9
Mar.	776.6	313.3	16.5	446.6	136.6	15.
Apr.	760.	306.6	13.8	430.	136.6	12.9
May	703.3	300.	13.4	486.6	150.	12.4
June	723.3	313.3	12.0	400.	120.	11.9
July	696.6	348.	14.5	473.9	153.3	11.8
Aug.	560.	216.6	16.	323.3	113.3	13.1
Sept.	697.	323.	16.4	320.	147.	10.5
Oct.	680.	320.	17.1	406.7	160.	13.2
Nov.	656.6	290.	21.7	400.	133.3	16.7
Dec.	833.3	366.6	23.	523.3	130.	16.2
	8513.3	3720.7	203.9	5133.7	1626.7	167.8

	Power #34	Power #35	Liberty Lake #36	Central Street #37	Winnetka #38	Ravinia #39
Jan.	456.7	233.3	223.3	256.7	910.	973.3
Feb.	550.	233.3	190.	283.3	800.	806.7
Mar.	436.2	190.	210	296.1	926.6	853.3
Apr.	446.6	223.3	176.6	275.3	808.9	880.
May	417.7	230.	200.	283.3	780.	773.3
June	340.	200.	193.3	413.3	920.	793.3
July	443.3	256.7	203.3	276.7	637.8	756.7
Aug.	343.3	200.	176.6	343.3	833.3	833.3
Sept.	443.	280.	227.	253.	710.	890.
Oct.	450.	260.	230.	300.	770.	917.
Nov.	416.6	233.3	220.	313.3	740.	850.
Dec.	520.	256.6	236.6	307.	814.	816.
	5263.4	2796.5	2486.7	3601.3	9650.6	10142.9

# POWER STATISTICS FOR YEAR 1944

## Monthly K.W. Demand - Illinois Stations

	Fort Sheridan #40	North Chicago #42	North Chicago A.24	Waukegan #43	Beach #44	W.Harbor #45	L.Bluff #80
Jan.	1,023.3	986.7	516.7	573.3	30.	270	1,056.7
Feb.	896.7	923.3	490.	546.7	110.	296.7	1,043.3
Mar.	866.6	943.3	503.3	540.	53.3	276.6	1,076.6
Apr.	876.6	960.	393.3	480	70.	206.6	996.6
May	726.6	773.3	466.6	440	53.3	230.	1,100.
June	716.6	710.	433.3	150.	223.3	333.3	956.6
July	850.	803.3	630.	-	226.7	196.6	1,130.
Aug.	673.3	373.3	666.6	463.3	163.3	400.	1,053.3
Sept.	827.	670.	570.	430.	53.	210.	1,100.
Oct.	756.6	610.	616.6	526.6	47.	316.6	1,120.
Nov.	813.3	630.	600.	556.6	50.	303.3	1,063.3
Dec.	840.	706.	667.	574.	93.	320.	1,170.
	9,866.6	9,089.2	6,553.4	5,280.5	1,109.9	3,359.7	12,866.4

	Waukegan Signals	Highwood Office	Waukegan Garage	Oakton Street	Howard Street	Winnetka Signals
Jan.	6.3	14.9	6.8	53.7	19.	22.7
Feb.	6.3	17.6	7.	38.	19.	12.
Mar.	6.3	17.1	5.9	33.3	19.	7.4
Apr.	6.3	13.	3.6	26.3	19.	6.4
May	6.3	11.8	3.6	15.	19.	5.7
June	6.3	8.7	2.3	2.3	19.	4.2
July	6.3	9.3	1.9	11.3	19.	4.2
Aug.	6.3	8.7	2.6	4.3	19.	5.1
Sept.	6.3	13.	1.8	9.7	19.	22.8
Oct.	6.3	11.7	3.1	16.	19.	7.3
Nov.	6.3	14.4	4.9	24.3	19.	9.
Dec.	6.3	16.7	5.1	29.	19.	21.1
	75.6	156.9	48.6	263.2	228.	127.9

# POWER STATISTICS FOR YEAR 1944

## Monthly K.W. Demand

	Beach A.C.	Winthrop Harbor A.C.	P.S. Total A.C.	Milw. A.C.	Total A.C.	P.S. D.C.	Total System
Jan.	1,341.7	428.	1,769.7	1,616	3,385.7	9,229.5	12,615.
Feb.	1,483.3	445.	1,928.3	1,616	3,544.3	8,967.2	12,511.
Mar.	1,445.8	420.	1,865.8	1,616	3,481.8	8,965.5	12,447.
Apr.	1,481.6	428.3	1,909.9	1,500	3,409.9	8,585.0	11,994.
May	1,325.	413.3	1,738.3	1,500	3,238.3	8,201.2	11,439.
June	1,412.5	541.6	1,954.1	1,508	3,462.1	8,006.3	11,468.
July	1,505.6	475.	1,980.6	1,529	3,509.6	8,161.1	11,670.
Aug.	1,287.5	455.	1,742.5	1,529	3,271.5	7,811.2	11,082.
Sept.	1,287.5	433.	1,720.5	1,529	3,249.5	8,249.5	11,499.
Oct.	1,300.	421.7	1,721.7	1,529	3,250.7	8,580.8	11,831.
Nov.	1,133.3	356.6	1,489.9	1,529	3,018.9	8,376.9	11,395.
Dec.	1,587.5	501.7	2,089.2	1,529	3,618.2	9,308.8	12,927.
	16,591.3	5319.2	21,910.5	18,530	40,440.5	102,443.0	142,883.

## Billing Demand in K.W.

	P.S. Co. D.C.	P.S. Co. A.C.	Milw. A.C.	Total
Jan.	9,229.5	1,769.7	1,616	12,615.2
Feb.	8,967.2	1,928.3	1,616	12,511.5
Mar.	8,965.5	1,865.8	1,616	12,447.3
Apr.	8,585.0	1,909.9	1,500	11,994.9
May	8,201.2	1,738.3	1,500	11,439.5
June	8,006.3	1,954.1	1,508	11,468.4
July	8,161.1	1,980.6	1,529	11,670.7
Aug.	7,811.2	1,742.5	1,529	11,082.7
Sept.	8,249.5	1,720.5	1,529	11,499.0
Oct.	8,580.8	1,721.7	1,529	11,831.5
Nov.	8,376.9	1,489.9	1,529	11,395.8
Dec.	9,308.8	2,089.2	1,529	12,927.0
	102,443.0	21,910.5	18,530	142,883.5

Average monthly K.W. demand for year 1944:

Public Service Co. D.C.	8,537
Public Service Co. A.C.	1,826
Wisc. Elec. Power Co. A.C.	1,544
System Max. A.C. & D.C.	11,907

# POWER STATISTICS FOR YEAR 1944

<u>Substation</u>	<u>Installed Capacity K.W.</u>	<u>Number of Units</u>
No.30 Skokie	2,000	1
No.31 Lake Ave.	1,500	1
No.32 Kotz Rd.	1,500	1
No.33 Deerfield Rd.	1,500	1
No.34 Old Mill Rd.	1,500	1
No.35 Laurel Ave.	1,000	2
No.36 Libertyville	1,000	1
No.80 Lake Bluff	1,900	1
No.38 Winnetka	1,500	1
No.39 Ravinia	2,000	2
No.40 Ft. Sheridan	1,500	1
No.42 No.Chicago N.S.	1,800	3
A.24 No.Chicago P.S.	1,500	1
No.43 Waukegan	1,900	1
No.44 Beach	1,000	1
No.45 Winthrop Harbor	1,200	1
	<u>24,300</u>	<u>20</u>
McKeown	1,000	2
Kenosha	1,000	1
Bose Rd.	1,000	1
Racine	1,000	2
Quarry	1,000	1
4 Mile	500	1
Carrollville	1,000	2
College Ave.	500	1
Milwaukee	2,000	2
	<u>9,000</u>	<u>13</u>
Total	33,300	33

Note: All substations are rotary convertor stations except No. 35, No. 80 - Lake Bluff and No. 43 - Pine Street, Waukegan which are mercury arc rectifier stations.

One unit at McKeown is a hand operated unit.

# ELECTRIC POWER SERVICE DIVISION

## Summary

1944

1943

### Crossing Protection

Autoflag With Bell - Locations	14	14
Autoflag - No Bell - Locations	4	4
Bell and Light Signal - Locations	4	4
600 Volt Bell on Gate - Locations	13	13
Electric Lighted Crossings	55	55

### Overhead Trolley

Catenary Construction - D.T. Miles	32.04	27.81
Wood and Steel Poles - Main Line - D.T. Miles	59.31	63.54
Steel Poles - Milwaukee - D.T. Miles	3.35	3.35
Steel Poles - Waukegan City - S.T. Miles	4.08	4.08
Wood Poles - Yards & Sidings - S.T. Miles	43.64	43.64
Wire Renewed - Miles	6.42	5.67
Wire Breaks	11.	18.

### Lighting

Passenger Stations	37	37
Freight Stations	9	9
Shelters	61	61
Shops and Car Houses	4	3
Substations	9	9
Office Buildings	2	2
Miscellaneous Buildings	31	31
Station Platforms	221	221
Yards	8	8

### Substations

Manual	4	4
Automatic	6	6

### Transmission Line - Miles

60 cycle - 33,000 volt - 3 wire	34.9	34.9
25 cycle - 33,000 volt - 3 wire	48.1	48.1
60 cycle - 2,300 volt - 2 wire	33.93	33.93
25 cycle - 13,200 volt - 3 wire	2.37	2.37

ELECTRIC POWER SERVICE DIVISION

Summary - Continued

	<u>1944</u>	<u>1943</u>
<u>Feeder Cable - Single Wire Miles</u>		
Copper Feeder Cable	177.21	185.67
<u>Bonding</u>		
Bonds Renewed	5346	4444